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REMARKS

The last Office Action of December 28, 2001 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1 and 2 are pending in the application.

It is noted that claim 2 has been objected because of an informality.

Claims 1 and 2 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,493,499 (hereinafter "Theurer et al.").

Claim 1 remains in the application. Claim 2 has now been canceled.

The rejection of claim 1 under 35 U.S.C. §102(b) as being anticipated by Theurer et al. is hereby traversed and reconsideration thereof is respectfully requested in view of remarks set forth below.

Independent claim 1 is directed to a method of surveying a track, wherein first and second measuring vehicles are positioned at end points of a track section. The second measuring vehicle is stationary during the measuring operation, with the first measuring vehicle moving relative to the second measuring vehicle.

Position coordinates of the second (stationary) measuring vehicle are determined at the start of each measuring cycle with the aid of a GPS receiver relative to a fixedly installed GPS reference station located adjacent the track section, wherein the coordinates of the GPS reference station are known within a terrestrial coordinate system.

A reference line in the form of an optical measuring beam is set up between an emitter mounted on the second measuring vehicle and a receiving unit mounted on the first measuring vehicle, and the reference line is aligned with the first measuring vehicle on the basis of the determined position data. During the advance of the first (mobile) measuring vehicle in the direction towards the second (stationary) measuring vehicle changes in position of the receiving unit mounted on the first measuring vehicle relative to the reference line are registered as correction values .

The Theurer et al. reference discloses a method for determining the deviations of the actual position of a track section. Two measuring units 1, 2 are provided. Assigned to each measuring unit 1, 2 is a satellite receiver 8. The two measuring units 1, 2 are placed at the end points of a section of track to be measured. These positions, also referred to as the starting point and end point, are located at track reference points 11 which are precisely defined in a track map. Thus the actual position of the starting and end point of the track section to be measured is absolutely defined in the particular position relative to the desired position as shown on the track map. By means of a position signal received by the two satellite receivers 8, a terrestrial coordinate system is created by which the relative position of the two satellite receivers 8 to one another can be precisely determined. Since the absolute position of the satellite receivers at the starting and end points respectively is also known, each position in this terrestrial coordinate system can thus also be determined in absolute terms.

The method disclosed in Theurer et al. requires that the position of the end points of the section of track to be measured is first established relative to track reference points 11, since commercially useable GPS satellite signals (unlike military satellite signals) are known to have built-in position inaccuracy due to the short pseudo-random code used and an intentionally introduced clock dither. This is a time-consuming process. However, once the absolute position is determined with an external reference point 11, relative movements of the GPS receiver are accurate.

Additional inaccuracies in the GPS-determined position can be introduced by local conditions. However, once a position of a stationary GPS receiver is determined relative to a known GPS reference station within a certain range, the mobile GPS receiver can be "calibrated" relative to the stationary GPS reference station, for example, by transmitting "aiding" signals to the mobile GPS receiver. This greatly enhances the positioning accuracy.

Unlike Theurer et al., the method of the present invention uses a GPS receiver only on the stationary vehicle and not on the mobile vehicle. The receiver on the stationary vehicle, unlike the receiver of the '499 patent, is not calibrated relative to a track reference point, but with respect to a fixedly installed GPS reference station located adjacent the track section, wherein the coordinates of the GPS reference station are known within a terrestrial coordinate system. The reference line in form of the optical beam is aligned with the first measuring vehicle only once at the beginning of the measurement process on the basis of the determined position data, thereby allowing a rapid advance of the mobile

measurement vehicle towards the stationary measurement vehicle which only measuring the displacement of the laser beam on the mobile measurement vehicle.

Since Theurer et al. does not describe each and every element and its cooperation recited in claim 1, namely the use of a GPS receiver mounted on the stationary measurement vehicle cooperating with a stationary GPS reference station, Applicants respectfully request that the rejection of claim 1 be withdrawn.

Withdrawal of the rejection of claim 1 under 35 U.S.C. §102(b) is thus respectfully requested.

Applicant has also carefully scrutinized the further cited prior art and finds it without any relevance to the newly submitted claims. It is thus felt that no specific discussion thereof is necessary.

Applicant believes that when the Examiner reconsiders claim 1 in the light of the above comments, he will agree that the invention is in no way properly met or anticipated or even suggested by any of the references however they are considered.

In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully

requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

The Commissioner is hereby authorized to charge fees which may be required, or credit any overpayment to Deposit Account No. 06-0502.

Respectfully submitted,

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